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REMARKS

Claims 1-64 are currently pending in the subject application and are presently under consideration. Claims 1-4, 8, 17, 19-21, 26, 30, 31, 37, 42, 44, 53, 54, and 62-64 have been amended as shown on pp. 2-19 of the Reply. Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

I. Rejection of Claims 1-64 Under 35 U.S.C. §101

Claims 1-64 stand rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. It is respectfully submitted that this rejection is improper for at least the following reasons. The subject claims product a useful, concrete and tangible result.

Because the claimed process applies the Boolean principle [abstract idea] *to produce a useful, concrete, tangible result* ... on its face the claimed process comfortably falls within the scope of §101. *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1358. (Fed.Cir. 1999) (Emphasis added); *See State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1373, 47 USPQ2d 1596, 1601 (Fed.Cir.1998). The inquiry into patentability requires an examination of the contested claims to see if the claimed subject matter, as a whole, is a disembodied mathematical concept representing nothing more than a "law of nature" or an "abstract idea," or if the mathematical concept has been *reduced to some practical application rendering it "useful."* *AT&T* at 1357 citing *In re Alappat*, 33 F.3d 1526, 31 USPQ2d 1544, 31 U.S.P.Q.2D (BNA) 1545, 1557 (Fed. Cir. 1994) (Emphasis added) (holding that more than an abstract idea was claimed because the claimed invention as a whole was directed toward forming a specific machine that produced the useful, concrete, and tangible result of a smooth waveform display).

Independent claims 1, 19, 30, 42, 44, 53, 54, 62, 63, and 64 have been amended herein to further emphasize that the invention produces a useful, concrete, and tangible result. For example, independent claim 1 (and similarly amended independent claims 19,

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30, 42, 44, 53, 54, 62, 63, and 64) as amended recites a first training algorithm that efficiently builds a rough model from a subset of the computer readable data set; an evaluation component that determines whether the subset of the computer readable data set is an appropriate subset to build a model for the computer readable data set; and a second training algorithm that builds a refined model for the computer readable data set from the subset if deemed appropriate by the evaluation component.

The subject claims produce at least two useful, concrete, and tangible results. More particularly, the evaluation component determines whether the subset of the computer readable data set is an appropriate subset from which to build a model. This is a useful, concrete, and tangible result since the refined model is generated by the second algorithm based on this appropriate subset. Additionally, when a subset is determined to be appropriate, the second training algorithm builds a refined model based on the subset. Therefore, an appropriate subset is determined and the appropriate subset is employed to produce a refined model of the computer readable data set, both of which are useful, concrete, and tangible results.

Moreover, the Office Action dated December 2, 2004 contends that "none of [the claims are] limited to practical applications in the technological arts" and the "Examiner finds that Applicant's 'data set' references are just abstract ideas." (p. 2). However, independent claims 1, 19, 30, 42, 44, 53, 54, 62, 63, and 64 have been amended herein to recite computer readable data sets. Therefore, it is believed that the claims as amended are limited to the technological arts.

In view of the above, it is readily apparent that the claimed invention reduces to a practical application that produces a useful, concrete, tangible result and is limited to practical applications in the technical arts; therefore, pursuant to *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1358 (Fed.Cir. 1999), the subject claims are directed to statutory subject matter pursuant to 35 U.S.C. §101. Accordingly, this rejection should be withdrawn.

II. Rejection of Claims 1-64 Under 35 U.S.C. §112, First Paragraph

Claims 1-64 stand rejected under 35 U.S.C. §112, first paragraph, because current case law and the MPEP require such a rejection for claims that stand rejected under 35

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U.S.C. §101. It is respectfully submitted that this rejection is improper for at least the following reasons. The rejection of claims 1-64 under 35 U.S.C. §101 should be withdrawn pursuant to the aforementioned comments rendering the subject rejection moot. Accordingly, this rejection should be withdrawn.

III. Rejection of Claims 1, 19, 30, 42, and 64 Under 35 U.S.C. §102(b)

Claims 1, 19, 30, 42, and 64 stand rejected under 35 U.S.C. §102(b) as being anticipated by Guha *et al.* (U.S. 5, 140,530). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Guha *et al.* does not teach each and every element of the subject claims.

For a prior art reference to anticipate, 35 U.S.C. §102 requires that “*each and every element* as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950 (Fed. Cir. 1999) (*quoting Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)) (emphasis added).

The subject claims relate to systems and methods that facilitate building a model to characterize data based on an appropriately sized subset of the computer readable data set. In particular, independent claim 1 as amended (and similarly independent claims 19, 30, 42, and 64) recites an evaluation component that determines whether the subset of the computer readable data set is an appropriate subset to build a model for the computer readable data set and a second training algorithm that builds a refined model for the computer readable data set from the subset if deemed appropriate. Guha *et al.* fails to anticipate or suggest such claimed aspects.

More particularly, Guha *et al.* does not teach or suggest an evaluation component that determines whether the subset of the computer readable data set is an appropriate subset to build a model for the computer readable data set. The Office Action contends that such aspects are anticipated by Guha *et al.* at Fig. 2 (the “Network Performance Evaluation” and “New, Untrained Network” elements). Applicants’ representative respectfully disagrees with such contentions. Guha *et al.* instead relates to cyclically

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updating blueprints (e.g., bit string designs for different neural networks) by using a genetic algorithm based on fitness. (See col. 2, ll. 63-66). The fitness of a network is a measure of worth, which is based on learning speed, accuracy and cost factors such as the size and complexity of the networks. (See col. 2, ln. 66 – col. 3, ln. 2). Guha *et al.*, however, is silent in regards to determining whether the *subset* of the computer readable data set is *an appropriate subset to build a model* for the computer readable data set. Thus, Guha *et al.* fails to anticipate or suggest such aspects of the subject claims.

Furthermore, Guha *et al.* does not teach or suggest a second training algorithm that builds a refined model for the computer readable data set from the subset if deemed appropriate as recited in amended independent claim 1 (and similarly in independent claims 19, 30, 42, and 64). Guha *et al.* updates the blueprints in a cyclical manner as depicted in Fig. 2. Thus, the same genetic algorithm is used to update the blueprint every time an update is effectuated. On the contrary, the subject claims a different training algorithm (the second training algorithm) is utilized to build a refined model. Moreover, Guha *et al.* is silent regarding building the refined model from the subset *if deemed appropriate*. Therefore, Guha *et al.* fails to anticipate or suggest such claimed aspects.

In view of at least the foregoing, it is readily apparent that Guha *et al.* does not anticipate or suggest the subject invention as recited in claims 1, 19, 30, 42, and 64. Accordingly, claims 2-18, 20-29, 31-41, and 43 which respectively depend from independent claims 1, 19, 30, and 42 are believed to be allowable. This rejection should be withdrawn.

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The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063.

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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